The RARS EXCITER

No. 329, September 1997 Repeaters: 146.64-, 224.64-, 444.525+, 444.95+ http://rtpnet.org/~rars

"Hey, I can't kerchunk the repeater!"

THE TRIANGLE TURNS TO TONE

Subaudible tone squelch has arrived in the Triangle. This time last year, no two-meter repeaters in the Triangle area required you to send subaudible tone to key them up. Now, several area machines are "full-time PL" (see page 5). If you want to be able to use all the two meter repeaters in the area, it's time to learn a bit about it. What is it, what does it do for you and for repeaters, and how do you make it work in your radio?

WHAT IS "SQUELCH"?

OK, what is subaudible tone? Motorola's trade name is PL, or Private Line, and that name is probably the most common one used. But the official "generic" industry name for it is CTCSS, or Continuous Tone Coded Squelch System, and if you look carefully at that name, it kind of gives away the nature of the system. Icom marks their front panel buttons simply as "tone," but their manuals refer to CTCSS.

But before describing subaudible tone squelch, I need to explain just plain old squelch. Let me be more accurate — make that "carrier squelch."

You know what an FM receiver sounds like without squelch. When you have the volume control high enough to understand speech, the loud rushing noise you hear on an empty channel with no squelch

continued on page 5

PUBLIC SERVICE EVENTS

The following Public Service Events need hams to provide communication assistance:

***Multiple Sclerosis Society MS-150,* September 27-28** Greenville to Camp Seagull. Volunteers needed to assist with bike-a-thon communications.

***NC State Fair*, October 17-26** - once again we will be assisting Red Cross medical teams by providing radio communications during the fair.

To volunteer, contact David Fix N4YTO at 677-8320 or difx@pagesz.net

David N4YTO

SHOW US YOUR QSL CARDS!

The September meeting program will be about QSL cards. Club members and anyone else interested is encouraged to call Pat KE4CFJ, and sign up to "show-and-tell" their favorites. Pat can be reached at 677-8320.

The Raleigh Amateur Radio Society, Inc. (RARS) founded in 1969, has grown to be one of the premier radio clubs in North Carolina. Current membership is approximately 400.

The objectives of the club are to promote world wide friendship through Amateur Radio; to be of public service by providing radio communication in times of disaster, emergency, or civic need; to educate members in radio technique, and to assist in obtaining Amateur Radio licenses.

All persons interested in Amateur Radio, currently licensed or not, are eligible to apply for membership to the club.

Dues to the club are $18.00 per year (which runs from July 1 to June 30). Applications for membership may be obtained from any of the officers named below; from the newsletter editor, named on the facing column; or at any RARS Meeting.

Club meetings are held the first Tuesday of every month, 7:30 PM, at Forest Hills Baptist Church, on the corner of Clark Avenue and Dixie Trail, just off of Hillsborough Street.

In addition to the many social and special events, the club sponsors a 2 m repeater, W4DW, on 146.04/64 MHz. The club also sponsors repeaters on 223.04 / 224.64 MHz, 449.5 / 444.5 MHz, 449.95 / 445.95 MHz and a packet cluster node on 147.57 MHz. All repeaters cover Raleigh, and most of the surrounding Wake County area. The auto-patch on W4DW is now no longer closed and is open to all duly licensed amateurs.

The RARS Homepage on the Internet World Wide Web is
http://rtpnet.org/~rars

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The EXCITER is published monthly by the Raleigh Amateur Radio Society, and is mailed at no cost to its members.

Letters to the Editor, technical articles, items of interest to the ham community and guest editorials are actively solicited.

Any article published in the EXCITER does not necessarily represent the views of, the Officers, Board of Directors, Editor, or Society Membership, nor does publication thereof represent concurrence by the Officers, Board of Directors, Editor, or Society membership with the contents of the article.

Articles will be printed at the discretion of the Editor, and no article will be published unless it is accompanied by the name(s) of the person(s) submitting the article.

All copy must be in the hands of the editor by the end of the Board of Director's meeting on the third Tuesday of each month. Articles submitted for publication may be hand or type written, an ASCII file on disk transmitted electronically via telephone modem, or on the ham bands using PACKET.

Ham related items for sale by the members will be advertised without charge for one issue, but may be re-submitted as often as desired. These ads must be non-commercial in nature.

Commercial ads will be run in return for the following donations to the club:

	Single Issue	**Full Year**
Business Card	$7.50	$75.00
Quarter Page	$11.25	$112.50
Third Page	$15.00	$150.00
Half Page	$22.50	$225.00
Full Page	$50.00	N/A

(Commercial ads must be of "camera-ready quality," and obviously can not be sent via ham bands.) Due to the reprographic process used, no color copy can be accepted.

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SPECIAL SERVICE CLUB

Young Ladies' Radio League

AMSAT

Southeastern Repeater Association Member

BREAKFAST WITH RARS

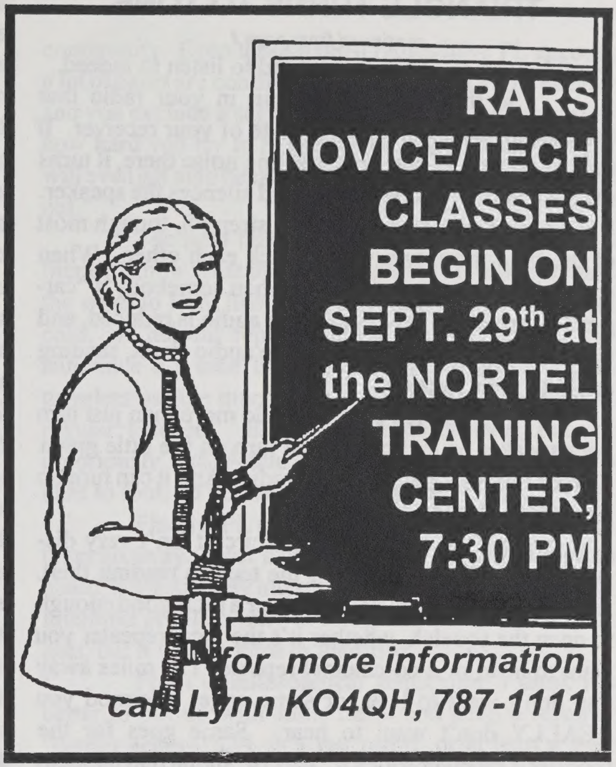
RARS is once again sponsoring a monthly "Ham" Breakfast meeting. The first meeting will be on September 6th. The breakfast will be held at Griffin's Restaurant on the first Saturday of each month at 10:00 am.

Griffin's is located in the North Market Square shopping center behind the Red Lobster on Wake Forest Rd. Griffin's is noted for their great breakfast and their prices are very reasonable.

The breakfast meeting is open to anyone with an interest in Amateur Radio, you do not have to be a member of RARS. Bring the family. There will be absolutely no business conducted at these meetings.

If you plan to attend, please send e-mail to kj4so@msn.com so that I can let the restaurant know how many people to prepare for.

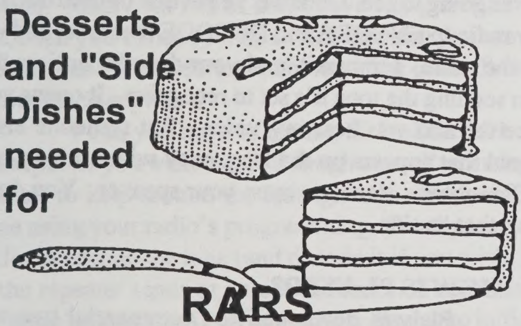
73,
Woody KJ4SO



RARS NOVICE/TECH CLASSES BEGIN ON SEPT. 29th at the NORTEL TRAINING CENTER, 7:30 PM

for more information call Lynn KO4QH, 787-1111

Desserts and "Side Dishes" needed for



RARS PICNIC October 11th at the Lake Crabtree Park.

Call Pat KE4CFJ (677-8320) to coordinate.
Hot dogs and hamburgers will be provided.

The RARS *ELMERS*

These folks stand ready and willing to share what they know with you. Check for them in the RARS roster or give me a call and I'll connect you up!

Name	Call	Specialty areas...
Gary Pearce	KN4AQ	FM & repeater operating, HT setup, VHF packet
Curt Phillips	W4CP	Mobile installations, SWLing, scanners, HT setup, Internet
Jim Dubreck	N4BYO	Station construction & operation
Paul Lewis	KE4DNK	Electronic theory & practice
Bob Keys	NA4G	Classic radios & electronics, CW
Chuck Littlewood	K4HF	General expertise
Lyn Williams	W4WDN	CW, climbing towers, alternate power, photography, kids,
Ed Nisley	KE4ZNU	PC & digital electronic stuff, programming, bicycle operation
Jeff Wittich	AC4ZO	HF Operating, antenna installation, first QSOs

And, of course, you know something that could help someone else... they need you! Call now for your spot on the RARS Elmer List!

Ed Nisley KE4ZNU
919 676-4525
enisley@ibm.net

TRIANGLE TURNS TO TONE

continued from page 1

would make an FM receiver hard to listen to indeed.

So there's a little circuit in your radio that samples the audio in an early stage of your receiver. If there's enough of that loud, rushing noise there, it turns off the rest of the audio circuit and silences the speaker. It's working on noise, not signal strength, though most of the time those two values track each other. When some signal appears — that is, when somebody's "carrier" is present — the noise in the audio is reduced, and the squelch turns on the rest of the audio chain, sending audio to your speaker.

The squelch circuit can do more than just turn your speaker on and off. It can turn on the little green light on the front panel of your radio. And it can turn on a repeater. Handy little circuit.

But the carrier squelch circuit isn't very discriminating (that's a pun for the techies reading this). Any signal that quiets your receiver a bit is good enough to open the squelch, whether it's the local repeater you want to hear, or a co-channel repeater 150 miles away you don't want to hear, or some pager intermod you REALLY don't want to hear. Same goes for the repeater's receiver squelch. Any ol' signal that happens by will key up the machine, like it or not. Sometimes you turn your squelch pot way up to try to block those weaker signals, but it's usually not a very effective solution. And we can't do that at the repeater, or you'll never hit it from your HT.

Is there a better way? Well, duh — why would I be writing this article if PL were not a solution to this problem? But it's not without it's drawbacks. Let's see how it works.

WHAT IS PL SQUELCH?

PL starts on the transmit end of things. It's simply a low frequency tone that gets added to your transmit audio, right along with your voice. And it's present as long as you're transmitting (that's the "continuous" part of CTCSS).

The tones are called "subaudible," but they really are not — there are 38 standard tones between 67 Hertz and about 250 Hertz. Humans can easily hear all these frequencies. What makes them "subaudible" is that their volume level is low compared to the voice they accompany (about 20% as loud as the voice), and the audio circuits in your radio are supposed to reduce any audio frequency below about 300 Hertz. The PL tone is not supposed to make it to your speaker, but on some radios, it does (some handhelds rely on the tiny speaker to do most of the PL filtering).

The circuit that adds PL to your transmitted audio is called the ENCODER, and almost every two meter rig made in the past ten years includes a PL encoder as standard equipment.

The other half of the PL story is in the receiver, where a circuit called a DECODER must be present to detect the PL tone from the transmitter. (In many radios, the PL decoder is an optional plug-in board, but it's becoming standard in more and more radios.)

HOW DOES IT WORK?

This is the KEY CONCEPT - the reason we're here, so listen up! PL takes over the job of the carrier as the means of telling your receiver when to open up the speaker and play a signal. When your DECODER hears the tone it's been set to look for, it opens up your speaker. No tone? — no audio to the speaker. Wrong tone? — no audio to the speaker.

This takes some coordination and cooperation between stations. If we're going to use PL squelch, you and I have to agree on which of the 38 tone frequencies we're going to use. Once we've got that figured out, I set my radio to ENCODE and DECODE that tone, and you do the same. I transmit, and your decoder notices that I'm sending the tone it's set to recognize. It opens your receiver and you hear my voice. But someone else's signal that appears on the frequency with no tone, or a different tone, does not open your speaker. You don't hear that station.

HOW IS PL USED?

PL was developed for commercial two-way radio use back in the 1950's. Even then, there was enough channel congestion in the big cities that several companies had to share each radio channel. The 38 tones allowed up to 38 separate users to pass their traffic on a channel without having to listen to each other. When Jane's Taxi dispatcher gave an address to a cab down on Main Street, Bob's Towing Service driver didn't hear a thing, even though they were using the same radio frequency.

Hams could use PL just exactly that way, but most often our goal is a little different. The signals we want to avoid hearing are usually from users on co-channel repeaters. Most ham repeaters have neighbors on the same frequency just over 100 miles away, much like RARS and Winston-Salem, both on 146.64. Most of the time, that's OK, but it's not far enough to guarantee that signals from one area will never key up repeaters in the adjacent area. In fact, during North Carolina's perpetual summer-morning band opening, repeaters often hear users in the next burg over. It is at least annoying, and that's generally why a repeater owner chooses to add a PL decoder to the repeater's receiver.

There's more. As a repeater user, you may be hearing the output of the neighbor repeater as a weak signal popping your squelch when the local machine isn't on the air. If your local repeater encodes PL, then the you can use a PL decoder to keep your receiver quiet unless the local machine is transmitting.

OK, HOW DO I USE PL IN MY RADIO?

Most modern radios have a built-in tone encoder. You'll have to check your manual to see how to set it. Some radios include a decoder as standard equipment as well, and some require an optional board that you plug in. And a few radios make the encoder an option. Really old radios don't have any provision for PL, but if you're handy with a soldering iron you can add a board (and if you screw it up, hey, that old radio isn't worth much anyway).

First, you have to learn which of the 38 tones the repeater you want to talk through uses. I've included a chart to help around the Raleigh area. Next, set that tone using your radio's programming. Finally, set your radio to encode the tone (and decode it if you wish, and if the repeater sends or passes the tone). There should be some little symbol on your radio's display to indicate that it's sending tone.

All the current radios I've seen allow you to store PL information in memories. That's great — you don't have to remember which repeater uses a tone and what the tone is. Just store it in memory and forget it.

PL IS A TOOL, A BAND-AID — A COMPROMISE

PL is a tool that generally works OK, but it is a compromise. It is NOT as good as a clear channel.

The biggest pain with PL is educating the ham community. Even though most radios have PL encode, a lot of hams are confused by it. Put PL on your repeater and you exclude a segment of the population, no matter how hard you try to help educate users. Some people will even get mad because they feel they've been "locked out."

The next hurdle is letting those who are "PL literate" know what the tone frequency is. You can pass the word to local hams, but travelers will be out in the cold. A helpful repeater might use its voice ID to announce it's tone frequency often enough to be let travelers use the machine, but that will be annoying to regular listeners. Repeater directories help, but are notoriously out-of-date on PL information. And it's hard to look up PL tones while driving.

Finally, PL masks problems, but doesn't make them go away. Your distant neighbor's signal won't be heard, but it still may interfere with a weak, local HT. An intermod problem may develop that bothers local signals, but it will be hard to identify.

From a philosophical standpoint, I think it's better to put up with some noise and keep a repeater "carrier access." PL is a last resort, or at least a later resort. But enough area machines have chosen to require PL that we all need to know how to use it. I hope I've helped.

Gary KN4AQ

TRIANGLE REPEATER TONE LIST

145.11 in Youngsville - 88.5 Hz
145.13 in Raleigh - 88.5 Hz
145.23 in Chapel Hill - 131.8
145.49 in Raleigh *(maybe)*
146.64 in Raleigh - SENDS 88.5, but does not require it for access.
146.82 in Wilmington - 88.5 Hz
147.015 in Raleigh - 88.5 Hz
147.075 in Pittsboro *(sometimes)*
147.195 in Raleigh - 88.5 Hz
147.27 in Johnston County *(sometimes)* - 100.0 Hz
146.30 in Wilson - 88.5
147.375 in Graham - 114.8
147.39 in Clayton - 88.5 *for full squelch sensitivity.*

Help NOT Wanted:

RADIO COPS

I talked to a young fellow on the repeater the other day who introduced himself by saying "my personal is Jim and you're my first contact". He seemed like a nice sort, delighted that he had just received his shiny new call sign, and was anxious to make some new friends.

Kind of sounded like I felt when I put my new call sign on the air the first time way back when, except probably brighter, because Jim is one of those young computer jocks. Me, I still got problems with the LL scale on my Pickett slide rule. Yea, I think Jim sounded brighter than me, quick to catch on to things.

But I don't think Jim will be back on the repeater. Before I had a chance to really get to know much about Jim, or even wrangle an invite to lunch, another station, with an impressive "senior" call sign joined the contact, flashed his shiny Radio Cop badge, and proceeded to issue Jim a "verbal speeding ticket" for improper lingo on the radio.

"Radio Cop" said the term "personal" (and for that matter "handle") were unwelcome in ham radio, and generally made my newfound friend feel like an unwashed interloper. (Gosh, I've been saying "handle" since I was a conditional class. Slow to catch on, you know.)

Now I should point out that "Radio Cop" took pains to appear very well meaning. Didn't use any bad words that I noticed, was quite polite, even seemed like he was trying to be "helpful." In other words, he thought he was doing Jim a favor by pointing out his transgression from our sacred Amateur Radio way of doing things.

I think Jim felt just the same way I did back in a new school in third grade when the well meaning teacher pointed out that "we don't keep our pencil behind our ear in this room." Sure enough, I looked around and none of my new classmates had pencils behind their ears. Sure was embarrassing, and at that moment I really wished I was back with my good old buddies in second grade.

Now, if I'd been allowed to hang out a couple of days, I'm sure I would have learned how to properly stow my pencil. And if Jim would have hung around a couple of days on our repeater, I just bet he would have noticed that his lingo, perhaps learned in another radio service, was a bit out of place. And very soon Jim would sound "just like the rest of us." Like I said, he seemed pretty bright to me, quick to catch on to things.

"Radio Cop", you have kept our hobby uncorrupted. I heard Jim down around 27 Mhz this morning trying to sell his barely used 2-meter HT. I'm gonna miss my new friend Jim, because I think I could have learned something from him. Maybe you could have also.

Like I said, he seemed pretty bright to me, quick to catch on to things. Gee, what do you think Jim caught on to?

73,
de Hans K0HB
via Jeff AC4ZO

PRESIDENT'S CORNER

(Since Cyndi insulted The EXCITER last month, she's lost the "use" of the gavel in this issue.)

We've got several events coming up in the club you may be interested in participating in. First, September's meeting is going to give you DXers a chance to show off your favorite QSL cards. Contact Pat KE4FCJ (677-8320) if you want to help out.

The picnic is coming up on October 11th. It will be held out at Lake Crabtree Park near the airport. We'll be providing the hamburgers and hot dogs but we'll be looking for folks to bring side dishes. Contact Pat KE4FCJ to let her know what you will be bringing. Bring the whole family. The park is a wonderful place just to spend the day watching the boats on the lake, hiking or taking your mountain bike for a spin around the single track trails at the lake.

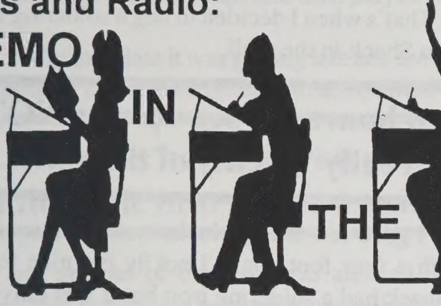
If you've never helped out with the MS150 there is still time to join us for a fun packed weekend on September 27 and 28. This event attracts hundreds of bike riders from all over the state to help raise much needed funds for Multiple Sclerosis. No experience is necessary to join the communications group, just call David N4YTO (677-8320) if your willing to help.

Look forward to seeing everybody at the September meeting!

73,
Cyndi KD4ACW

Kids and Radio:

DEMO IN THE CLASSROOM



So there I was, standing in front of a class, talking about Amateur Radio. To fifth graders. During the last period of the day. On the Friday before a holiday. Reminder to self: check calendar before volunteering.

Not by coincidence, two weeks earlier the Education Department hammered out a draft lesson plan that folks could use for presentations in schools. I was the designated guinea pig, talking to students at Millbrook Elementary during their "Science In The Classroom" day, with one third grade and two fifth grade classes that afternoon.

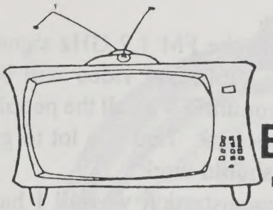
Not very much to my surprise, none of the students knew a ham or had the faintest idea what hams do. That made the discussion of why anyone would want to become a ham rather difficult indeed. I talked about how this radio stuff works (without any electromagnetic field theory!), showed some antennas (what does a beam do that a rubber duck doesn't?), chatted with a few hams on the HT ("This is KO4QH, bus mobile!"), told ham stories (Skywarn and Fran figured prominently), and demonstrated a bunch of radio gadgetry.

What works: show-and-tell objects with audience participation. Radios are good, antennas are better, Morse code paddles are fun, tower-climbing equipment is best of all. The bigger, the better: I lugged a two-meter beam antenna and my bicycle-mobile setup along without popping any light bulbs. Kids like bikes-- especially with a mobile whip.

What doesn't work: abstract theory, numerical examples, long-winded explanations, and appeals to public interest. We knew this when we laid out the lesson plan, I kept my presentation as concrete as I could, and still ran into trouble. Did you know Mir orbits

continued on page 9

ATV DEMO: A GRAND EXPERIMENT



It was a day for which I had been preparing for several months. It was the April 8th meeting of the Durham FM Association (DFMA) and I was to give a program and a demo of Amateur Television (ATV). This would be my third ATV demo on my tour of the Triangle area.

First there was RARS, then OCRA and now DFMA. This demo also would be the most complicated and challenging demo... if it all worked. Things got complicated because DFMA meets in the Picadilly Cafeteria at South Square Mall in Durham. With ATV an outside antenna is a must in most cases and I did not think the Cafeteria people or the mall people would take kindly to me running cable into the cafeteria.

The losses associated with long cable runs can also be a problem. I decided that a transportable ATV cross-band repeater would be required for the demo. I had been wanting to experiment with ATV cross-banding and this was my chance.

An ATV cross-band repeater works much like a voice cross-band repeater that most FM dual band mobile radios do these days except that both audio and video are transmitted and you can't just go buy one off the shelf.

The cross-banding plan was to go like this. The Triangle ATV repeater will be received on 421.25 MHz in the parking lot of the mall using a small yagi antenna mounted on a portable 20 foot mast (another article to write!). My 70cm ATV transceiver will be used to convert 421.25 MHz to channel 3.

The channel 3 RF will then be demodulated into audio and video by a PC electronics channel 3 tuner that runs on 12 volts DC. The audio and video will connect to a 1.2 GHz FM TV transmitter. The 1.2 GHz Transmitter will transmit about 2.5 watts into a mobile mag mount antenna on top of my truck. This 1.2 GHz signal is what will be received in the cafeteria.

Now, inside the cafeteria would be the following equipment: Another 1.2 GHz mag. mount antenna will feed into a commercial satellite receiver. The satellite receiver demodulates the FM 1.2 GHz signal into audio and video. The audio and video will be connected to a large video monitor/TV so all the people at the meeting can see the picture. That is a lot to go through but it theoretically should work.

Just a one way demonstration was all I had planned but a week or so before the demo I thought it would be neat if I could transmit from the meeting also. Well, that requires even more equipment.

To transmit from the cafeteria a 900 MHz regular AM TV transmitter which I built from a kit will be used. A modified cellular telephone antenna will be connected to this transmitter. A camcorder will serve as the video/audio source.

To receive the 900 MHz signal in the parking lot a borrowed Retecon VCR "rabbit" type of downconverter will be used to convert 900 MHz down to channel 3. A Sony TV tuner will demodulate the Channel 3 RF to video and audio. This video and audio will then be connected to the transmitter of my 70 cm ATV transceiver where it will be transmitted on 434.00 MHz to the Triangle ATV repeater.

The output of my ATV transceiver is about 1.5 watts so I will run that through a Mirage 100 watt amplifier. The Sony TV tuner and the 900 MHz downconverter will not run off of 12VDC so I had to buy a small power inverter to convert 12VDC to 120VAC. The 100 watt amplifier will be powered from a LARGE 12V battery.

A picture would make the setup easier to follow but I was not sure it would get reproduced very well so just read the paragraphs again if you did not follow them the first time. I tested individual components of the system but I never tested the whole system together. I did not have video sensing relay switches to turn transmitters on and off so Joe Simpson KD4LLV, agreed to man the cross-band repeater and control the transmitters. I would be in contact with him on 2 meters from the cafeteria.

I arrived at the mall at about 5:30pm to start setup. That was two hours before the start of the meeting. Plenty of time...... right? That's what I thought.

I started setting up the antenna first and that's when I noticed it! The antenna had a broken solder connection and I brought every tool know to man EXCEPT a soldering iron. It had to be a BIG soldering iron too because the piece that broke was a large piece of copper. That's when I decided to beg a soldering iron at the Radio Shack in the mall.

Two hours for set-up was NOT really "plenty of time"!

I got a few strange looks walking through the mall with a four foot yagi. Luckily the nice folks at Radio Shack had a soldering iron but it was only a 100 watt model. After about 20 minutes of trying I finally got it barely tacked back together. I rushed back to the parking lot where I met up with Joe and we assembled the system.

The next step was to see if I could receive the ATV repeater. I activated the ATV repeater ID screen and I could see the repeater excellently in living color!!! I contacted Nick England KD4CPL, at his house on 2 meters and asked him to transmit to the ATV repeater. All I could see was flashing horizontal lines across the screen.

I tried transmitting to the repeater and all Nick could see was flashing lines. We finally decided that something was wrong with the repeater receiver. Nick only lives about 5 miles from the mall so we decided to go direct. We tried that and I could see Nick excellent and Nick could see me excellent. As a note, a few days later the repeater was OK so it is possible that some other equipment at the repeater site was interfering with the ATV repeater.

OK, the outside is done, now for the inside. I rushed inside and quickly set up that equipment. I few more trips back and forth to the parking lot and I think I had everything working. The meeting was well attended and my presentation on ATV went well. Then the time came for the demo.

I instructed Joe to turn everything on outside and for Nick to start his transmission. Nick appeared on the screen in living color with audio. He showed everyone his shack and his impressive collection of Heathkit equipment. He also introduced us to his dog, Morgan. Everyone had a good time watching Nick. Then I tried transmitting from the meeting. Nick could see folks at the meeting!!! At first Nick could not hear audio but I discovered it works better if you plug the audio cable into the transmitter.. DAHH!! I panned the camera and Nick identified a few of the people at the meeting.

Nick also recorded my video and then played it back to us.

By that time it was getting late and the cafeteria was about to close. We quickly disassembled everything and got out of there. I was amazed, but very pleased, that everything worked so well. I think everyone had fun at the meeting. It was a lot of work, but I know I had fun!

"...it works better if you plug the audio cable into the transmitter."

I would like to thank Woody KJ4SO, Frank KA2FWC, David KD4WQU, Sean KF4IVA, and Joe KD4LLV for loaning some of the equipment for the demo. Special thanks to Joe KD4LLV, and Nick KD4CPL for helping make the ATV demo a success.

If you are interested in finding out more about ATV please contact me at 677-1525 or come to a monthly meeting of the Triangle ATV Association. The association meets the 4th Wednesday of every month at the Old Country Buffet in the Pleasant Valley Promenade shopping center on US70.

We meet at 6:30pm for dinner and the meeting officially starts at 7:30pm. On special occasions the meeting may be moved to another location so it would be a good idea to verify the meeting location. Please come and join in on the fun. The Association has a lot of plans and projects. I hope to SEE you on ATV soon.

73,

Mark Freeze WD4KSE

CLASSROOM DEMO

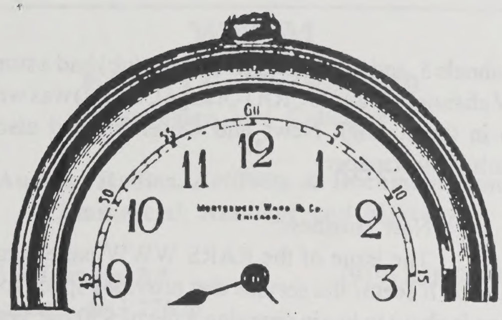
continued from page 7

a million miles up and Alaska is a foreign country?

The students seemed interested in what I had to say, were generally polite (with, alas, one major lapse when the teacher left the room for a few minutes), and we had a lot of fun with the toys. The forty minutes of each class passed very quickly, even though I didn't show any video tapes, and my throat recovered by early Saturday.

When you volunteer to tell a class about amateur radio, you'll get a solid lesson plan, a video tape, and all the coaching you need. Call Lynn KO4QH at 787-1111 to get started! It's a lot of fun and makes you feel good all over!

Ed Nisley KE4ZNU



MINUTES OF THE MEETING

RARS Board Meeting

July 15, 1997

The monthly Board meeting of the Raleigh Amateur Radio Society was held at the Forest Hills Baptist Church on July 15. The meeting was called to order by KE4FCJ at 7:47p. Members present were: KN4AQ, W4CP, KE4FCJ, K4HF, WD4RDT, KC4UPX, W4VFJ, N4YTO, and AC4ZO.

On motion by K4HF, seconded by KC4UPX, the June minutes were approved.

AC4ZO gave the Treasurer's report in the absence on WA4BPJ.

KE4FCJ gave the VP report. She said that the RARS picnic will be held at Lake Crabtree this year, and a tentative date of October 11 has been chosen.

KC4UPX gave the FM Committee report. He said that the Bayleaf tower will be coming down, but that we have not received our ninety day written notice to evacuate the tower. Because of delays at the Department of Transportation, we expect our new evacuation date to be sometime in December. The issue of tower space on the North Carolina Highway Patrol tower is still being worked.

AC4ZO reported on the Education Department. He said that the RARS General Class Upgrade Program is scheduled, and will begin on July 23.

KE4FCJ, reporting on the Membership Services Committee said that Mike (WA4BPJ) has contacted her about taking over membership renewals. Pat is seeking a volunteer to do this as part of Membership Services.

KN4AQ reported favorable press coverage for the Field Day event. RARS activity was covered by TV channels 5, and 22. N4NC (the Cary club) had a story on TV channel 11, and OCRA (Orange County) was written up in the Raleigh News and Observer, and also the Durham newspaper.

New Business:

The issue of the RARS WWW page was discussed. It seems the service that provides space for our page is about to begin charging a fee of $50 per year for their service. A motion was made by KN4AQ, seconded by KC4UPX to approve the expenditure of $50 for this purpose. The motion was carried.

The following announcements were made by Board members:

KN4AQ — The Red Cross has written a Memorandum Of Understanding with ham radio, but there is a problem delivering the MOU to the ham radio community, because there is no Wake County EC.

The following comments were made:

W4CP — The July Exciter has not been mailed because of illness and other problems.

On motion by KC4UPX, seconded by W4VFJ, the meeting adjourned at 8:41pm.

Respectfully submitted,
Jeff Wittich, AC4ZO - Secretary

Regular RARS Meeting

August 5, 1997

The regular meeting of the Raleigh Amateur Radio Society was held on August 5, 1997 at the Forest Hills Baptist Church on Clark Avenue. The meeting was called to order at 7:38p by Cyndi KD4ACW. She welcomed 87 members and 9 guests.

Cyndi began by announcing that the guest speaker for the evening would be Mike Everette WA4DLF, and his topic was Reginald Fessenden.

Cyndi then gave the Treasurer's report in the absence of Mike.

Bernard KC4UPX, reviewed our policy of dealing with lids on the RARS repeaters... which is to ignore them.

Lynn KO4QH, announced the RARS fall classes. The Novice/Tech class is scheduled to begin on September 29, and meet on Mondays and Thursdays for six weeks. The location will be the Nortel Technical Training Center, as usual.

Lynn, now speaking on behalf of the Crystals, pointed out that the Crystals are peddling baked goods near the donut table. Also, a reminder that the Crystals meet on the fourth Tuesday of each month at the Golden Corral on Hwy. 70.

Chuck K4HF, gave the Nominating Committee report. The Nominating Committee was made up of K4HF, and KM4BU. They announced that their nominee for the 1998 Rarsfest and North Carolina State Convention is Cyndi Wood KD4ACW. The floor was then opened for nominations. Hearing none, a motion was made by AC4ZO, seconded by KD4WQU that nominations be closed. The motion passed. A motion was then made by KA2FWC and seconded by KD4ZVW that the Secretary by instructed to cast a unanimous ballot in favor of the nominee. The motion was carried.

Pat KE4FCJ, announced the RARS picnic. The event will be held on October 11, at the beach shelter at Lake Crabtree Park. RARS will provide burgers and dogs, and members are asked to bring a covered dish. There will be a dessert contest as usual, and contestants will be allowed to bribe the judges (my suggestion for bribe matter: chocolate. - sec.)

Pat, now speaking as Vice President, said that the September meeting will be about QSL cards, and members were encouraged to call her, and sign up to "show-and-tell" their favorites. Pat can be reached at 677-8320.

At this point, the Field Day video was shown. This was edited and produced by our own KN4AQ, and was enjoyed by all.

At 8:12p Cyndi introduced the program for the evening: The Work of Reginald Fessenden. The Speaker was Mike Everette WA4DLF.

Door prizes went to WD4KSE, KM4BU, KC7UBD, WD4RDT, and Rani Patel.

The meeting adjourned at 9:25p.

Jeff Wittich AC4ZO
Secretary

RARS TRADING POST

For Sale: Cushcraft R-7 vertical HF antenna. Element slightly bent from Hurricane Fran, but easily repairable. $125 negotiable.
Gifford KC4SAM, 787-1258

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**Yet another month
has passed and you
haven't availed yourself
of the many benefits
of advertising in the EXCITER.
See page 2 for details so
you can correct this oversight.**

LEGISLATIVE ALERT:

Tauzin Drops a Bomb Shell (HR 2369)

Here is the latest legislative threat to the monitoring hobby. This bill is pure poison to all branches of the radio hobby. In particular, we are extremely concerned with section 3 of this bill amending the Communications Act of 1934. Every radio listener and ham needs to contact his or her elected officials in Washington and voice opposition to this bill.

Unlike the Markey bill, HR 2369 does have cosponsors and, given the timing in the legislative calendar, it may have an excellent chance of getting through Congress this session. This bill has the same provisions in it as the Markey bill (HR 1964) plus the new language on scanner mods in section 2 and the new, very restrictive language for the Comm Act of 34 in section 3. This affects every radio listener from shortwave right on up to the microwave regions. If your hobby is listening to something other than broadcast radio or television, ham, or CB, this bill could and probably will affect you.

We will be posting additional info and analysis after we talk to the legal folks. On the surface, this doesn't look good at all. We are going to have a major fight on our hands here.

Prepared by Larry Van Horn,
Assistant Editor Monitoring Times, Editor, Satellite Times,
and Rachel Baughn, Editor Monitoring Times, Assistant Editor
Satellite Times

—

Monitoring Times/Satellite Times
P.O. Box 98
Brasstown, NC 28902

—

http://www.grove.net/mtnews2369.html

—

For more information on this and other scanning and shortwave listening issues, contact Curt W4CP, 772-0207 (cphillips@pobox.com) or any other member of the Scanner/SWL SIG.

Amateur Radio - Public Service & FUN!

Raleigh Amateur Radio Society, Inc.
P.O. Box 17124
Raleigh, NC 27619

Address correction requested.

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BRING YOUR QSL CARDS TO THE MEETING
see page 1

Calendar of Events:
September 1997

Sept 2:	**Regular RARS meeting; Forest Hills Baptist Church, directions on page 2. Program: QSL Cards, see page 1.**
Sept 6:	**RARS Breakfast meeting, Griffin's Restaurant, 10AM, see story page 3.**
Sept 10:	**RARS VHF/UHF SIG meeting, info- David N4YTO, 677-8320**
Sept 11:	**Information Highway User Group, info- Russ Lyday KD4LLS, 782-8703**
Sept 15:	**Scanner/Shortwave Listening SIG, info- Curt W4CP, 772-0207** ***We're ON THE MOVE: call for meeting location info!***
Sept 16:	**RARS Advisory Board; Forest Hills Baptist Church, 7:30PM** **ALL RARS MEMBERS WELCOME!**
Sept 23:	**Crystals Meeting, Golden Corral, Hwy 70W, info- Lynn KO4QH, 787-1111**
Sept 24:	**ATV Meeting, Old Country Buffet Restaurant, info- Mark WD4KSE, 677-8320**
Sept 29:	**RARS Novice/Tech Classes begin, info- Lynn KO4QH, 787-1111**
Oct 11:	**RARS Picnic, Lake Crabtree Park, DESERTS and side dishes NEEDED! info- Pat KE4CFJ, 677-8320, see page 3**

send additions, changes and corrections to the Editor as listed on page 2